



INSTRUCTIONS

This manual contains important warnings and information.  
**READ AND KEEP FOR REFERENCE.**

Rev. E  
Supersedes Rev. B  
Unreleased Rev. D  
and PCN C

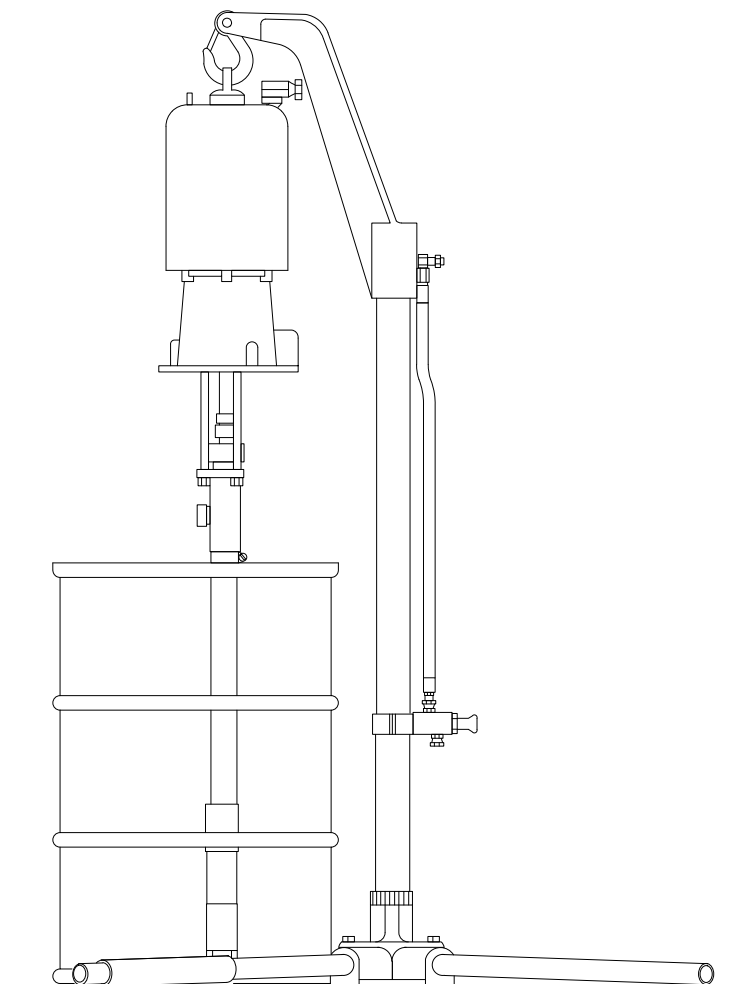
## Air-Operated Pump Elevator

*50 psi (3.4 bar, 0.34 MPa) Maximum Working Pressure*

100 lb (45 Kg) Maximum Lift Weight

### Model 218-704, Series A

For use with 22:1 Senator II, drum length bung pump, Model 218-611



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## Symbols

### Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

### Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

## WARNING



INSTRUCTIONS

### EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are not sure, call your Graco distributor.
- Do not alter or modify this equipment.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a 50 psi (3.5 bar, 0.35 MPa) Maximum Working Pressure.
- Remove the air and fluid pressure in the pump before raising the pump to prevent unexpected cycling of the pump.
- Keep your fingers away from the bung hole of a covered drum, or the bung adapter of an open drum, when lowering the pump into the drum.
- Never use the elevator to lift a pump which weighs more than 100 lb (45 Kg).
- Handle hoses carefully. Do not pull on hoses to move equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 66°C (150°F) or below -40°C (-40°F).
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

## Manual Change Summary

- The entire manual was revised electronically.
- Hoist Cable 181-224 has been obsolete.

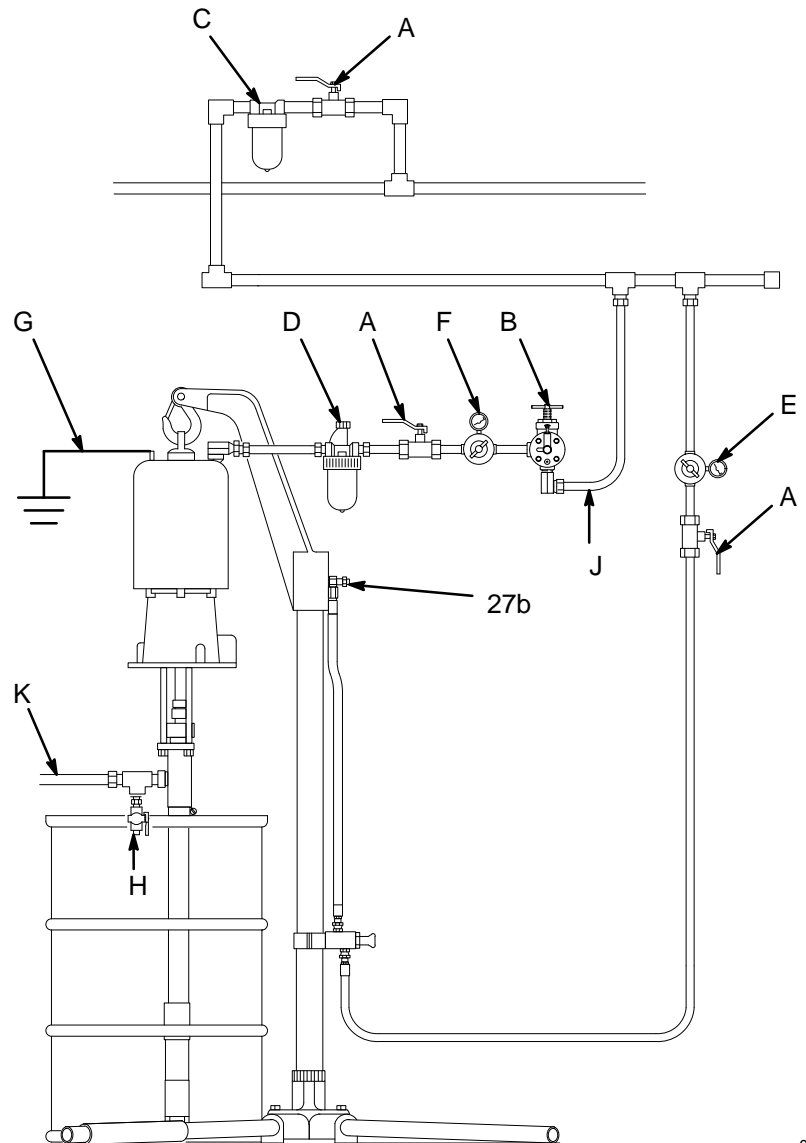
- The Part Number for Ref. 37 (GASKET, rubber) changed from 108-336 to 155-899.

# Installation

## Typical Installation

### KEY

- A Bleed-Type Master Air Valve
- B Pump Runaway Valve
- C Air Line Filter
- D Air Line Lubricator
- E Elevator Air Regulator
- F Pump Air Regulator
- G Ground Wire
- H Drain Valve
- J Grounded Air Supply Hose
- K Grounded Fluid Supply Hose
- 27b Restrictor Needle Valve
- 31 Air Valve Knob



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Locate the elevator wherever you need to transfer a pump from one drum to another. The elevator legs may be removed from the base and the base can be bolted to the floor for a permanent installation. Use bolts long enough to firmly anchor the elevator, and provide sufficient clearance for plumbing.

Install an air regulator gauge close to the elevator. Screw an air supply hose into the 1/4 npsm(f) swivel adapter on the bottom of the valve bracket. See the Typical Installation.

The Typical Installation shown is only a guide. Contact your Graco representative for system design assistance.

# Operation/Maintenance

## WARNING

To reduce the risk of serious injury, including pinching or amputating your fingers, or splashing fluid in the eyes or on the skin, always follow these precautions when using the elevator.

- Relieve the air and fluid pressure in the pump before raising the pump to prevent unexpected cycling of the pump.
- Keep your fingers away from the bung hole of a covered drum, or the bung adapter of an open drum, when lowering the pump into the drum. Grasp the pump well above the foot valve when guiding the pump into the drum.
- Never use the elevator to lift a pump which weighs more than 100 lb (45 Kg). The elevator may not be able to hold a heavier pump, and the pump could drop unexpectedly, causing personal injury as well as property damage.
- Do not group drums around the elevator legs with the intent of rotating the pump from drum to drum. Doing so would require turning the elevator shaft to a position which places the air valve (31) in a hard to reach place.

1. Grasp the lift ring of your pump with the hook of the elevator.
2. Set the air regulator at zero regulated pressure. Turn on the main air supply.

3. Pull out the air valve (31) knob to start to raise the pump.
4. Increase the regulated air pressure slowly – just enough to raise the pump and hold it in an elevated position.
5. Use the restrictor valve (27) to control the lift speed of the elevator. Turn the needle valve (27b) IN to decrease speed, and OUT to increase speed.
6. Remove the bung hole cover from the drum, or secure a bung adapter to an open drum, then position the drum under the pump.
7. Push in the air valve (31) knob. The pump will lower slowly. Grasping the pump well above the foot valve, guide the foot valve into the bung hole or adapter. Keep your fingers away from the bung hole or adapter to prevent pinching them.
8. Secure the pump to the bung hole or adapter.

### Lubrication (Fig. 1)

Every two to six weeks, remove the elevator arm (23) and put a few drops of light, high grade motor oil on the inside surface of the riser tube (11) to lubricate the leather packing.

## CAUTION

Be careful not to dent the elevator riser tube. Doing so will impair the elevator operation.

# Service

## Replacing the Cup Packing (Fig. 1)

1. Screw the bearing housing (6) out of the riser tube (11) and slide the tube off the piston (14).
2. Screw the piston retainer screw (20) out of the piston housing (14) and remove all parts.
3. Inspect the parts for damage and replace as needed. Soak the new leather packing in light oil. Coat the inside surface of the riser tube with lithium base grease.
4. Reassemble in the reverse order of disassembly. Apply Loctite® 56765 thread sealant to the internal threads of the piston (14) and the threads of the capscrew (20), and torque the screw to 15–20 ft-lb (20–27 N•m).

## Replacing the Support Tube Gasket (Fig. 1)

1. Screw the riser tube (11) out of the elevator base (4). Remove the gasket (39). Be careful not to damage the outside bearing surface of the riser tube.
2. Place a new gasket (39) in the base. Use PTFE tape on the threads of the tube, and screw the tube into the base.

## Repairing the Air Valve (Fig. 2)

1. Remove the screw (113), washer (112) and seal (111). Screw the guide (102) out of the valve body (109) and pull the assembled parts out of the body.
2. Disassemble the parts, clean and inspect for wear and damage, replacing parts as needed. Apply sealant to the threads of the stem (110), and reassemble the valve.

- 1 Apply thread sealant to internal threads of piston (14) and the threads of capscrew (20).
- 2 Torque to 15–20 ft-lb (20–27 N•m)
- 3 Assemble parts onto piston (14) as shown on page 6.

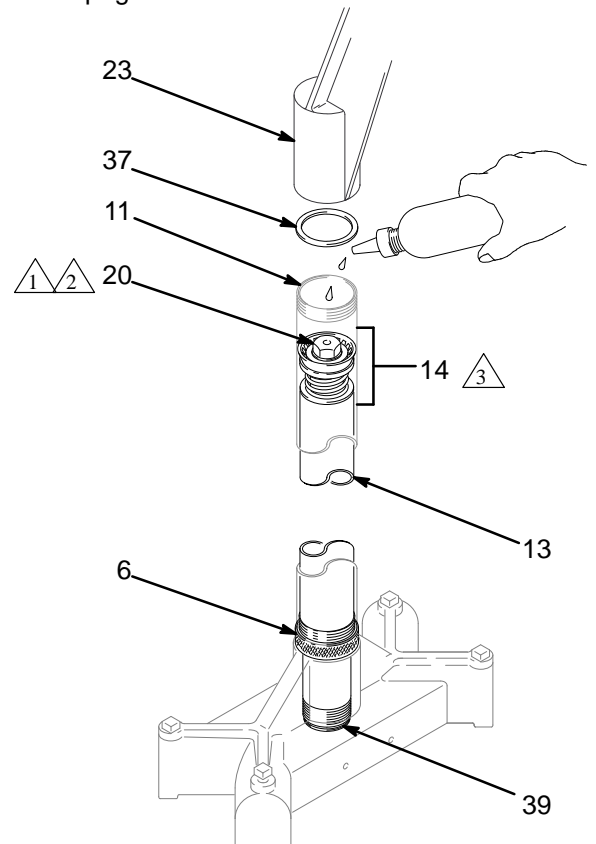


Fig. 1

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- 1 Apply Thread Sealant

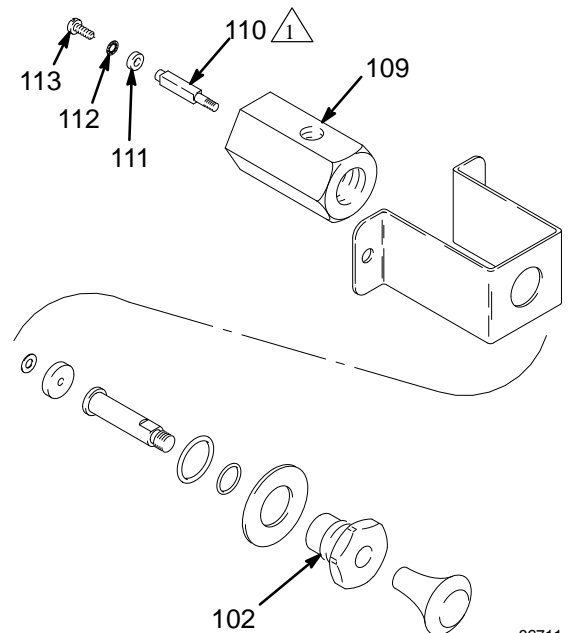
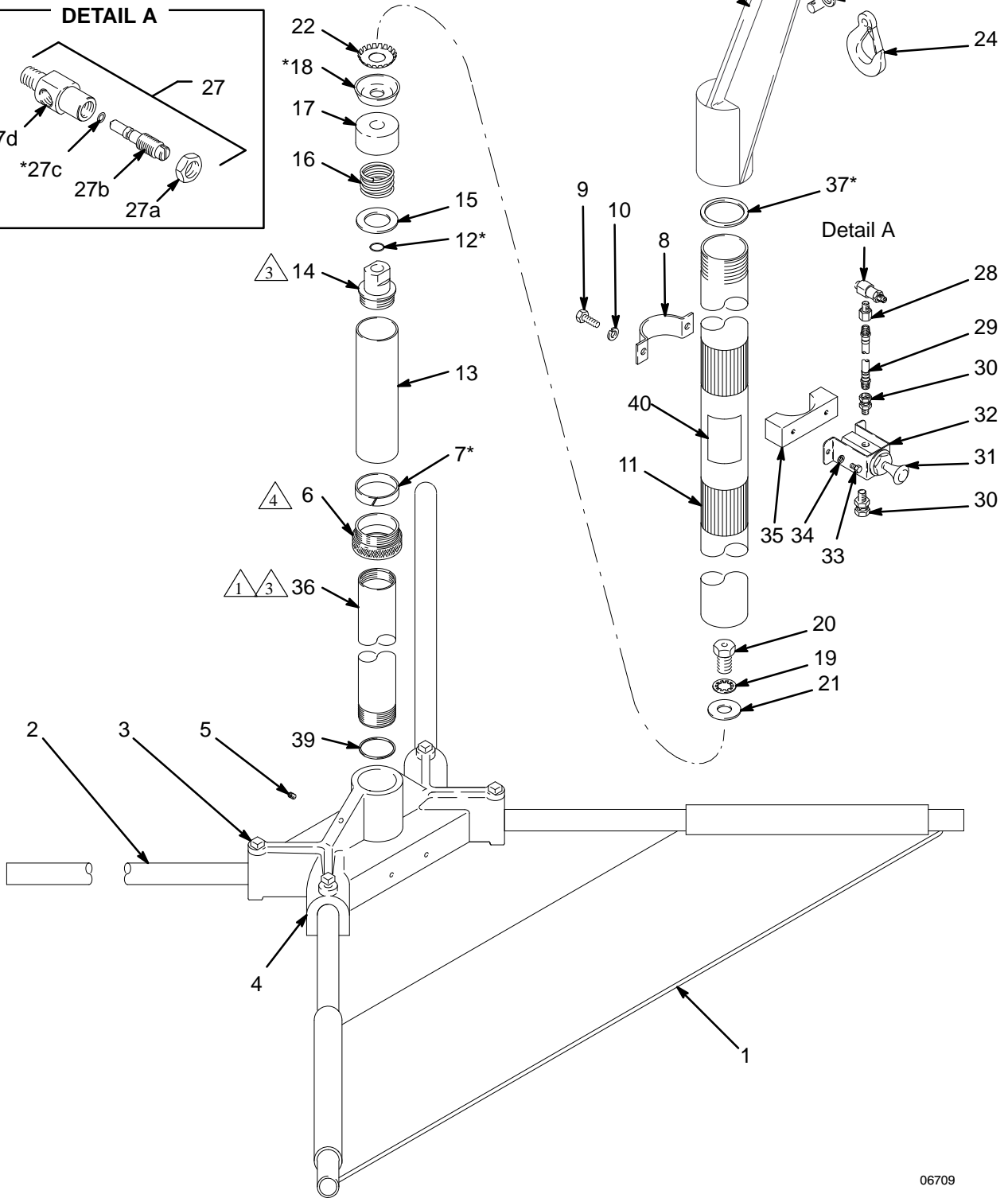
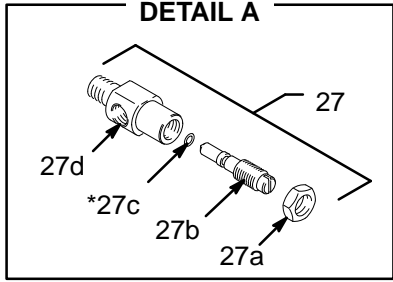


Fig. 2

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# Parts

- △1 Apply Sealant to Threads
- △2 Torque to 20–40 ft-lb (27–54 N•m)
- △3 Torque to 90–130 ft-lb (120–175 N•m)
- △4 Torque to 30–60 ft-lb (41–82 N•m)



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# Parts

## Model 218-704, Series A Elevator

Includes items 1-41

Ref. No.	Part No.	Description	Qty.
1	206-299	PLATE, stabilizing	1
2	165-731	LEG, elevator base	4
3	100-005	SETSCREW, 1/2 x 1"	4
4	165-730	BASE, elevator	1
5	100-139	PLUG, pipe, hdls; 1/8"	1
6	167-871	HOUSING, bearing	1
7*	167-872	BEARING, tape	1
8	158-271	BRACKET, riser tube	1
9	100-057	CAPSCREW, hex hd; 5/16 x 0.75"	2
10	100-214	LOCKWASHER, 5/16"	2
11	181-082	TUBE, elevator, riser	1
12*	722-834	PACKING, o-ring	1
13	167-873	TUBE, straight	1
14	158-261	HOUSING, piston	1
15	158-265	WASHER, flat	1
16	158-388	SPRING, compression	1
17	167-870	GUIDE, tube	1
18*	158-260	PACKING, cup	1
19	100-422	LOCKWASHER, internal	1
20	162-408	CAPSCREW, hex hd; 3/4 x 1.625" lg	1
21	156-306	WASHER, flat	1
22	150-230	WASHER, spreader	1
23	181-083	ARM, elevator	1
24	108-181	HOOK, sling, eye	1
25	101-946	PIN, cotter, 1/8" dia x 1-1/2"	1
26	108-180	PIN, clevis	1
27	203-743	VALVE, restrictor; Includes items 27a-27d	1
27a	101-448	. NUT, hex, ham; 3/8-24	1
27b	160-163	. NEEDLE, valve	1
27c*	157-628	. O-RING	1
27d	160-162	. BODY, valve	1
28	159-840	ADAPTER, 1/2 npt(f) x 1/8 npt(m)	1
29	200-118	HOSE, air, neoprene, cpld 1/4 npt (mbe); 2.6 ft (792 mm)	1
30	208-434	ADAPTER, union; 1/8 npt (m) x 1/4 npsm (f) swivel	2
31	202-295	VALVE, snap over; See separate parts list at right	1
32	154-634	BRACKET, valve	1
33	100-157	CAPSCREW, hex hd; 1/4-20 x 0.357"	2
34	100-016	LOCKWASHER, 1/4"	2
35	181-081	CLAMP	1
36	167-875	TUBE, elevator guide	1
37*	155-899	GASKET, rubber	1
39	158-429	GASKET	1
40†	181-234	LABEL, warning	1
41	170-786	WASHER, flat	1

\* Recommended Tool Box spare parts. Keep these spare parts on hand to reduce down time.

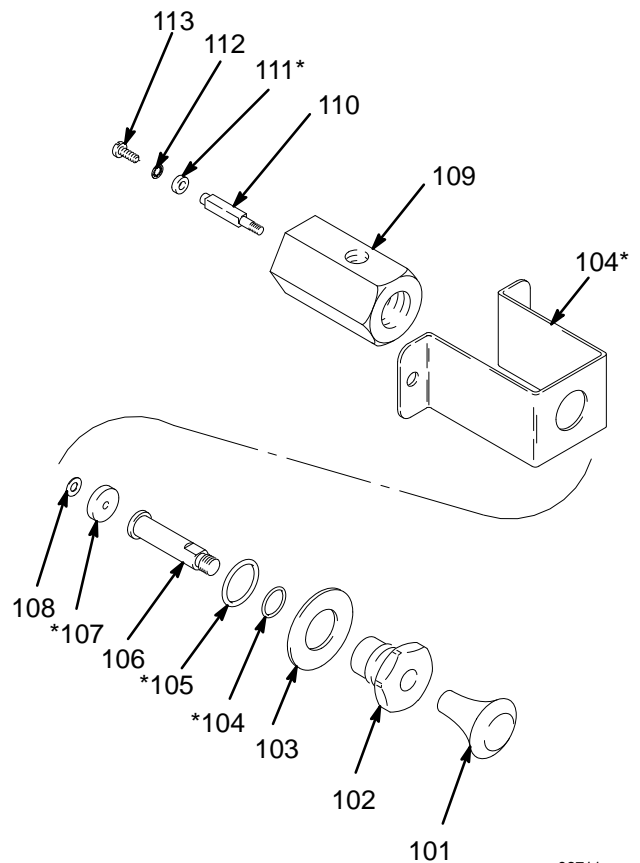
† Extra warning labels are available at no cost.

## Air Valve 202-295

Includes items 101-113

Ref. No.	Part No.	Description	Qty.
101	154-519	KNOB	1
102	157-161	NUT, packing and guide	1
103	154-526	WASHER, special, plain	1
104*	154-594	O-RING, packing	1
105*	155-500	O-RING, seal	1
106	161-129	STEM, large round, air intake	1
107*	155-811	SEAL, flat cup, air intake	1
108	154-570	WASHER, plain, special	1
109	157-160	BODY, valve	1
110	161-132	STEM, small square	1
111*	155-921	SEAL, flat cup, air exhaust	1
112	100-272	LOCKWASHER, int, shakeproof; No. 6	1
113	104-560	SCREW	1

\* Recommended Tool Box spare parts. Keep these spare parts on hand to reduce down time.



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# Graco Phone Number

**TO PLACE AN ORDER**, contact your Graco distributor, or call this number to identify the distributor closest to you: **1-800-367-4023 Toll Free**

# Technical Data

Height  
Lowered ..... 73.94 in. (1878.07 mm)  
Raised ..... 112.50 in. (2857.5 mm)  
Weight ..... 112 lb (50 Kg)

Loctite® is a registered trademark of the Loctite Corporation.

## The Graco Warranty and Disclaimers

### WARRANTY

Graco warrants all equipment listed in this manual which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

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